REMARKS

The Office examined claims 1-46 and rejected same. With this paper, claims 1-46 remain in the application.

Claim objections

At section 2 of the Office action, claim 2 is objected to for formalities. With this paper, claim 2 is changed in a way believed to overcome the objection.

Rejections under 35 USC §102

At section 4 of the Office action, claims 1, 2, 5, 7, 9-11, 13-15, 25, 27, 35, 39, 41 and 45 are rejected under 35 USC §102 as being anticipated by U.S. Pat. No. 5,742,640, hereinafter Haoui.

Claim 1 recites a method for use by a sending device, including: computing error detection bits based on both protected bits to be wirelessly communicated over a protected channel and also other bits to be wirelessly communicated over another channel; and transmitting the error detection bits with the protected bits on the protected channel and transmitting the other bits on the other channel. Thus, error detection bits transmitted on one channel enable error detection of the one channel and also of another channel.

In grounding the rejection, the Office asserts that:

> Haoui discloses the use of both wired and wireless communication between a sending device (base) and receiving device (cellular),

citing col. 5, lines 5-16, 35-45; col. 6, lines 46-64; col. 7, lines 55-67; col. 8, lines 1-31.

Haoui discloses a method of communication over a radio link and then a wired link in which different FEC encodings are used

for the two links in order to reduce the bit error rate. At col. 5, line 56, Haoui explains:

> The system and method of the present invention reduces the bit error rate (BER) of communications between wireless subscriber units and a PSTN 120 using low bit rate communications. The reduced BER is achieved by protecting signals transmitted between base stations 80 and subscriber units 60 using radio forward error correction (FEC) and by protecting signals transmitted between base stations 80 and RSC 100 using wire FEC. …

In connection with this method of reducing the bit error rate, Haoui discloses a method involving segregating bits to be transmitted into class 1 bits and class 2 bits. Some of the class I bits are especially important, and others are less so (but are more important than the class 2 bits). Haoui discloses determining CRC bits based on only some of the data bits to be communicated over a channel--the most important class 1 bits. The CRC bits and the bits on which they are based (the most important class 1 bits) as well as the other class I bits are then FEC encoded to provide protected bits. Finally, the protected bits are then interleaved over two time slots with the other bits, the class 2 bits, which are also not used in determining the error detection bits. See Figure 5A, and see Haoui beginning at col. 7, line 55, where Haoui explains that:

> FIG. 5A is a block diagram, taken directly from the PDC standard, of a radio FEC encoder 130 used in a current embodiment of the invention. In accordance with the PDC Standard, the speech coder 66,114 *segregates compressed speech bits into class 1 bits and class 2 bits*. Class 1 bits, which are more important to speech perception than class 2 bits, are protected with radio FEC. The class 2 bits are not. …
>
> The radio FEC encoder 130 employ three mechanisms, in accordance with the PDC Standard, to mitigate speech channel errors. First, a 9/17 convolutional coder 131 protects the more vulnerable class 1 bits 132 of the speech coder data stream 133. In the subscriber unit 60, the data stream is provided by the speech coder 64. In the base station 80, the data stream is provided by the wire FEC 90. Second, a *cyclic redundancy check (CRC) circuit 140 computes a CRC code 142*

> *over the most perceptually significant class 1 bits 135 of the speech coder data stream*. Third, an interleaver 134 interleaves the code class 1 data 136 plus the class 2 data 138 for each speech coder frame over two time slots to mitigate the effects of Rayleigh fading. As explained more fully below, error correction is applied at a decoder portion 146 of a receiving radio FEC, and the *CRC bits are checked to determine whether the most perceptually significant bits were received properly*.

Thus, Haoui actually teaches *exactly the opposite* of the invention. Instead of determining error detection bits based on the bits to be transmitted over two different channels, one protected and one not, Haoui teaches determining error detection bits based on *only some of the bits to be communicated over a protected channel and not any of the bits to be communicated over another channel*.

Applicant notes that Haoui teaches interleaving the protected bits (the FEC encoded error detection bits and class 1 bits) with the class 2 bits over two slots. Even so, it still cannot be said that Haoui teaches computing error detection bits *based on both protected bits to be wirelessly communicated over a protected channel and also other bits to be wirelessly communicated over another channel*, as required by claim 1. Haoui uses the term "channel" to refer to a carrier at a particular frequency. See col. 6, line 50, where Haoui explains that, "Each different channel 82 transmits and receives signals at a different radio frequency." The two time slots are of course time slots on the same channel. Thus, Haoui is not even disclosing bits being transmitted over two different channels.

But if the Office is of a mind to assert that each time slot is a different "channel" according to some other use of that term, Haoui still cannot be said to teach the invention, because then Haoui must be said to teach determining error detection bits based on bits to be transmitted on two different channels and then transmitting some of the error detection bits on one of the

channels and others of the error detection bits on the other channel. The claim language clearly requires that all of the error detection bits be transmitted only on the "protected channel." Nevertheless, in order to expedite prosecution, applicant adds to claim 1 language that emphasizes this aspect of the invention, and thus makes even more indisputable the distinction between the invention in claim 1 and the teachings of Haoui.

Similar changes are made to all the other independent claims rejected under 35 USC §102, which each include limitations corresponding to those recited in claim 1. The arguments used for claim 1 therefore apply to all these other independent claims.

Rejections under 35 USC §103

At sections 6 and 7, the other claims are rejected under 35 USC §103 as unpatentable over Haoui as applied in the rejections under 35 USC §102, in view of other references. The rejections under 35 USC §103 include rejections of independent claims 16, 28, 36 and 43. With this paper, these claims are changed in the same way as claim 1 is changed, and also to make the limitations of these claims correspond more clearly to those of claim 1. Thus, the same arguments used for claim 1 also apply to these independent claims.

Request to withdraw all rejections

Since all the independent claims are believed distinguished from Haoui for the reasons given for claim 1, applicant respectfully requests that all the rejections relying on Haoui be reconsidered and withdrawn, both the rejections under 35 USC §102 and also those under 35 USC §103.

Conclusion

For all the foregoing reasons it is believed that all of the claims of the application are in condition for allowance and their passage to issue is earnestly solicited. Applicant's attorney urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

Respectfully submitted,

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Date

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